Contributors

Acknowledgments

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Encouraging Use of Coupons to Stimulate Condom Purchase

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A B S T R A C T

Objectives. This study examined the feasibility of using high-value coupons to induce condom purchase and evaluated execution factors that can influence the effectiveness of this form of promotion.

Methods. Two levels of coupon discount value (10% off and 75% off) were used to promote condom purchase among young adults. Coupons were distributed according to a widespread strategy or a more focused in-store disbursement method.

Results. Redemption of coupons distributed through the widespread disbursement strategy was negligible. In contrast, coupons from the in-store distribution method, particularly the higher value coupon, resulted in a high redemption rate.

Conclusions. This research provides strong evidence that discount coupons, particularly high-value ones distributed at the purchase location, can be used successfully as a condom promotional incentive. (*Am J Public Health.* 1999; 89:1866–1869)

Inconsistent use of condoms among sexually active people continues to be one of the major factors contributing to the spread of sexually transmitted diseases.[1] There are a number of reasons why condoms are not used,[2–4] including lack of availability[5–7]: If a person does not have a condom, one cannot be used.

One approach to increasing the availability of condoms is to distribute them at no charge.[8] However, giveaways are often single-time promotions that provide only one or two condoms per person; in other cases, condoms are available at limited distribution sites and at specific times. Moreover, organizations that provide condoms free of charge often do not have the resources to make them available in large quantities.[9]

In contrast, in North America at least, condoms are readily and continually available in drugstores and other retail outlets. It would seem that health organizations could increase the use of condoms if they could convince people to purchase condoms regularly from such outlets. However, barriers to condom purchase (e.g., embarrassment, cost) have limited the success of programs that seek to increase purchase rates.[9–11]

One way to stimulate purchase in retail outlets is through the use of promotional incentives. The purpose of the present investigation was to assess the viability of using high-value coupons to induce condom purchases and to identify critical execution factors (i.e., distribution methods, coupon characteristics) that would result in the effectiveness of this promotional strategy.

Methods

Study Design

The study was conducted in Vancouver, British Columbia, Canada, over a span

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of 4 months during 1995. Two levels of coupon discount value were used to promote purchase. Given potential barriers to the purchase of condoms, a coupon with high face value (75% off) was used to motivate redemption. While a 75% discount may not be viable for businesses, such a strategy is possible for nonprofit organizations. The second coupon level (10% off) represented a more traditional discount amount and served as a comparison point for the higher discount. Both coupons were good for one box of 12 condoms of a well-known brand.

In addition, the study involved 2 different methods of coupon distribution, both targeted at sexually active young adults (aged 18–30 years). One was a widespread coupon disbursement at a variety of locations frequented by the target population (e.g., bars, nightclubs, sports and special events, fitness clubs, shopping centers, and recreation parks). A total of 6100 coupons (10% coupons: n = 2300; 75% coupons, n = 3800) were distributed to all identifiable population members at each site. The coupons were redeemable (within 6 months) at any retail outlet that carried the corresponding brand. Redemption was tracked with the cooperation of a coupon clearinghouse.

The second distribution method moved the coupon disbursement closer to the purchase environment. Specifically, coupons were distributed to members of the target population as they entered a particular drugstore where the couponed brand was sold. This approach was an attempt to make the coupons easier to use, that is, to minimize the "costs" involved in using them. Previous research has shown that consumers find it effortful to use coupons (i.e., they must store the coupons, remember to take them to the store, redeem them, and so forth).[12] In addition, these coupons were usable only on the day of distribution and only at the retail outlet where they were distributed. This further minimized the effort involved in coupon redemption and provided an additional purchase stimulus.[13]

The in-store disbursement involved 2 separate waves of distribution approximately 2 months apart. On both occasions, the coupons were distributed between 3:00 PM and 7:00 PM on a Friday and Saturday. The face value of the coupon was alternated each hour. Coupons were distributed to all identifiable members of the target population as they entered the store. In the first and second waves, respectively, 1080 coupons (10% coupons, n = 540; 75% coupons, n = 540) and 1580 coupons (10%
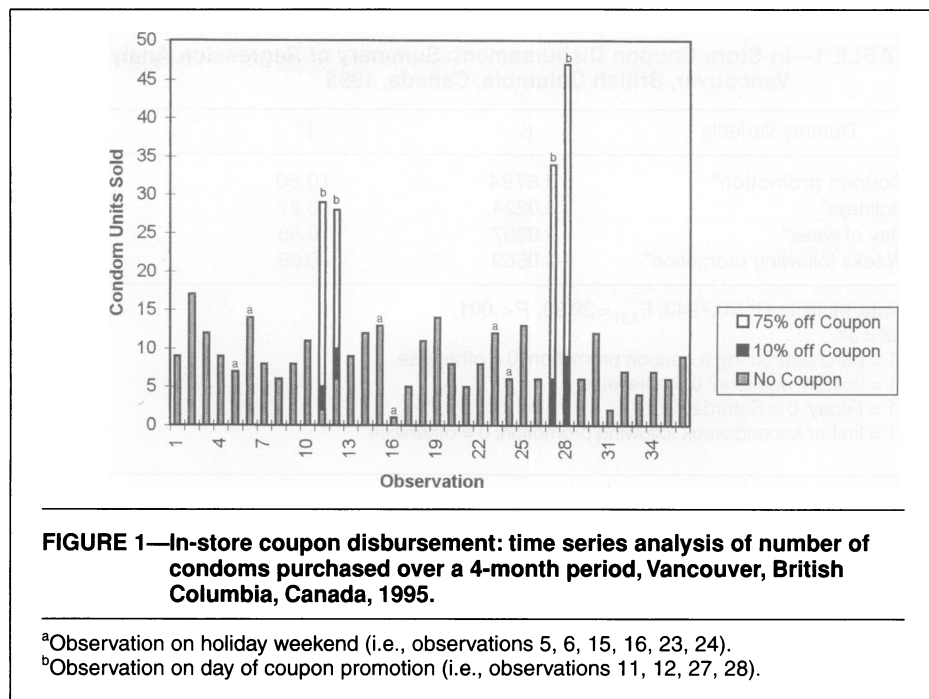

FIGURE 1—In-store coupon disbursement: time series analysis of number of condoms purchased over a 4-month period, Vancouver, British Columbia, Canada, 1995.

[a]Observation on holiday weekend (i.e., observations 5, 6, 15, 16, 23, 24).
[b]Observation on day of coupon promotion (i.e., observations 11, 12, 27, 28).

coupons, n = 819; 75% coupons, n = 761) were distributed.

Measures

The primary dependent measure was the redemption rate of the distributed coupons. In the in-store distribution, we obtained additional measures. Foremost was the ability to track sales (packages of 12 condoms) every Friday and Saturday (3:00 PM to 7:00 PM) over a 4-month period that encompassed the 2 distribution waves. This created a base rate measure of purchase that provided a comparison point for the effects of the distributions.

In the second wave of in-store coupon distribution, the following additional measures were collected: number and sex of people who came to the condom display, time spent at the display, number of brands examined, and whether a condom purchase was made. This was accomplished through the use of a confederate posing as a store employee. These observational measures were also collected every Friday and Saturday in the 3 weeks before and after the second in-store distribution.

Results

Widespread Coupon Disbursement

The redemption rates for the widespread distribution were 0.0% (0/2300) for the 10% coupons and 0.3% (13/3800) for the 75% coupons. Chi-square analysis indicated that this represented a significant difference in redemption for the different coupon value levels ($\chi^2_1 = 7.89$, $P < .01$). The higher redemption rate achieved with the 75% coupon, although somewhat greater than the typical coupon redemption rate for condoms (i.e., 0.1%), was still minimal.

In-Store Coupon Disbursement

A linear regression equation was estimated with the number of condoms purchased as the dependent variable and presence of a coupon promotion, day of the week, holidays, and weeks following promotion were identified as dummy predictor variables (see Figure 1 and Table 1). Coupon promotion was the only significant predictor of number of condoms purchased ($t_{31} = 10.50$, $P < .001$). (All t tests cited are unpaired and 2-tailed.)

The results of the observational measures (Table 2) indicate that among both women and men, the number of condoms purchased during the coupon promotion was significantly greater than the baseline purchase level. This effect (values are weekend averages) occurred with both the 10% coupon (male purchases: 8.0 vs 5.3 [$t_{13} = 4.07$, $P < .01$]; female purchases: 6.0 vs 1.3 [$t_{13} = 12.76$, $P < .001$]) and the 75% coupon (male purchases: 47.0 vs 5.3 [$t_{13} = 62.58$, $P < .001$]; female purchases: 18.0 vs 1.3 [$t_{13} = 45.23$, $P < .001$]). However, the 75% coupon was much more likely to induce purchases among male customers (10% redemption: 1.8%; 75% redemption: 10.8%) as well as female customers (10% redemption: 1.6%;

TABLE 1—In-Store Coupon Disbursement: Summary of Regression Analysis, Vancouver, British Columbia, Canada, 1995

Dummy Variable	β	t [a]	P
Coupon promotion[b]	0.8794	10.50	.001
Holidays[c]	0.0224	0.27	.788
Day of week[d]	0.0697	0.86	.398
Weeks following promotion[e]	−0.0569	−0.68	.499

Note. Multiple $R^2 = 0.7943$, $F_{4,31} = 29.93$, $P < .001$.
[a] $df = 34$.
[b] 1 = purchase during a coupon promotion; 0 = otherwise.
[c] 1 = holiday weekend; 0 = otherwise
[d] 1 = Friday; 0 = Saturday.
[e] 1 = first or second week following promotion; 0 = otherwise.

TABLE 2—In-Store Coupon Disbursement: Observation Results, Vancouver, British Columbia, Canada, 1995

	Coupon Type		
	No Coupon	10% Off	75% Off
Condoms purchased			
Men	5.3	8.0	47.0
Women	1.3	6.0	18.0
Coupon redemption rate, %			
Men	...	1.8	10.8
Women	...	1.6	5.6
Shoppers who browsed			
Men	1.5	6.0	11.0
Women	1.2	1.0	7.0
No. of brands examined			
Men	2.0	1.4	1.1
Women	1.6	3.0	1.8
Time taken at display, s			
Men	58.3	53.6	73.2
Women	37.5	105.0	82.2

Note. Values are weekend averages derived from a 6-week observation period that surrounded the coupon disbursement. Both purchasers and browsers composed the shopping sample for the number of brands and time taken observations.

75% redemption: 5.6%). The redemption rates associated with the in-store distribution method were much larger across both coupon values than the rates associated with the widespread coupon distribution.

The people who browsed at the condom display but did not make a condom purchase were identified through observation. The results (see Table 2) indicate that both coupon values significantly increased the number of men who browsed at the condom display (10% coupon: 6.0 vs 1.5 [$t_{11} = 9.6$, $P < .001$]; 75% coupon: 11.0 vs 1.5 [$t_{11} = 20.27$, $P < .001$]). Among women, however, only the 75% coupon increased browsing relative to the base level (10% coupon: 1.0 vs 1.2 [$t_{11} = 0.48$, $P > .10$]; 75% coupon: 7.0 vs 1.2 [$t_{11} = 16.93$, $P < .001$]).

Regarding other measures, when the observed shopper was male, the coupon promotion significantly reduced the number of brands examined (10% coupon: 1.4 vs 2.0 [$t_{93} = 1.78$, $P < .10$]; 75% coupon: 1.1 vs 2.0 [$t_{137} = 5.19$, $P < .001$]) but had no impact on the amount of time (measured in seconds) taken in the condom aisle (10% coupon: 53.6 vs 58.3 [$t_{93} = 0.33$, $P > .10$]; 75% coupon: 73.2 vs 58.3 [$t_{137} = 1.64$, $P > .10$]). Across both promotion levels, male consumers focused on the discounted brand. In contrast, during the coupon promotion, female shoppers spent more time at the condom display (10% coupon: 105.0 vs 37.5 seconds [$t_{35} = 4.51$, $P < .001$]; 75% coupon: 82.2 vs 37.5 seconds [$t_{53} = 2.88$, $P < .01$]) and examined more brands, although the latter difference was significant in the 10% condition only (10% coupon: 3.0 vs 1.6 [$t_{35} = 2.94$, $P < .01$]; 75% coupon: 1.8 vs 1.6 [$t_{53} = 0.57$, $P > .10$]).

Discussion

Health organizations would achieve some of their aims if they could convince people to purchase condoms regularly from retail outlets. Targeted, carefully designed promotional programs have the potential to stimulate condom purchases.

Our results suggest that even high-value coupons are not successful by themselves in inducing condom purchases. However, when these coupons are distributed in a focused manner, it becomes possible to increase their promotional impact and decrease the difficulty involved in using them. Future research should examine the effect of different discount levels and alternative distribution methods on initial and repeat sales of condoms.

Both male and female consumers responded to the coupons, but male consumers increased their purchases much more dramatically. Moreover, male and female shopping behavior changed in different ways. Male shoppers became more focused and considered fewer brands; female shoppers explored alternatives more fully, evaluating more brands and spending more time considering a purchase. Perhaps most significant was the large increase in the number of both male and female shoppers visiting the section where the condoms were sold, a potential first step to eventual and regular purchases. □

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Future Hospital Care in a Population-Based Series of Twin Pairs Discordant for Physical Activity Behavior

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ABSTRACT

Objectives. This study investigated the association between physical activity behavior and morbidity, taking into account genetic selection.

Methods. Hospitalizations were followed from the beginning of 1977 to the end of 1986 in 710 same-sex healthy twin pairs discordant for leisure-time physical activity and in 151 pairs discordant for all physical activity at baseline in 1975.

Results. During the follow-up, among twin pairs discordant for leisure activity, the active member spent, on average, 43% fewer days in the hospital than the inactive member; the corresponding percentage was 55% among pairs discordant for all activity.

Conclusions. Physically inactive behavior is associated with increased need for hospital treatments, even after genetic and other confounding factors are taken into account. (*Am J Public Health.* 1999;89:1869–1872)

Many observational studies have suggested that physically active lifestyles decrease morbidity and premature mortality.[1–9] However, genetic selection or early childhood experiences may make it easier for some individuals to adopt a physically active lifestyle, as well as favoring them with lower morbidity. We analyzed use of hospital care resulting from various diseases as an indicator of the possible health benefits of physical activity among same-sex twin pairs discordant for physical activity behavior. Hospitalization in Finland is a good measure of the occurrence of diseases needing special care, because the Finnish social security system entitles every citizen to appropriate hospital treatment.[10,11]

Methods

Sample

The Finnish Twin Cohort, which includes all same-sex twin pairs born in Finland before 1958 in which both twins were alive in 1967, was compiled from the Central Population Registry of Finland via procedures described elsewhere.[12] The twins were mailed a questionnaire in autumn 1975 (response rate: 87.6%). Zygosity (monozygotic, dizygotic, or unclassified) was defined according to a validated questionnaire method.[13]

The target group for the present study consisted of cohort subjects aged 25 to 64 years on January 1, 1976, who supplied complete questionnaire data and were alive on January 1, 1977. Because chronic disease may restrict ability to exercise, we excluded at baseline subjects with at least 1 of the following chronic diseases (as described previously in detail[9]): cardiovascular disease (except for hypertension or venous diseases), diabetes, and chronic obstructive pulmonary disease. We also excluded subjects who had incident malignant cancer before 1977.

After these exclusions, complete questionnaire data were available for 13290 subjects (6630 men and 6660 women) presumed healthy at baseline. Of this cohort, we studied in detail the 710 same-sex twin pairs (333 male pairs and 377 female pairs; respective mean ages at baseline: 37.4 and 37.7 years) discordant for leisure-time physical activity behavior and the 151 pairs

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